## **EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	"20060014218".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON .	2007/09/07 19:41
L2	979	(golz.in. and (stefan.in. or s.in.))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:41
L3	161	(bruggemeier.in. and (ulf.in. or u.in. ))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:41
L4	115	(weingartner.in. and (bernhard.in. or b.in.))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:42
L5	1099	12 or 13 or 14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:42
L6	6	I5 and npff\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:42
L7	6	npffr1 or npff1r	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:42

## **EAST Search History**

	,					
L8	11	fij10751	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:42
L9	0	gpr147	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:43
L10	0	gpcr147	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2007/09/07 19:43
L11	0	npff1r1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:43
L12	22	ot7t022	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:43
L13	9	RFamide near5 related near5 peptide near5 receptor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2007/09/07 19:44
L14	10	RFamide near15 related near15 peptide near15 receptor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:44

## **EAST Search History**

L15	45	I7 or I8 or I12 or I14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:44
L16		l15 and l5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:45
L17	35	l15 and (cardio\$10 or vascul\$10 or heart\$10 or myocard\$10 or ischem\$10)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR ·	ON	2007/09/07 19:45
L18	1	I15 same (cardio\$10 or vascul\$10 or heart\$10 or myocard\$10 or ischem\$10)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:46
L19	2	"6262246".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON ·	2007/09/07 19:47
L20		"2269192".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/07 19:47

Page 3

## STN SEARCH HISTORY

=> d his

(FILE 'HOME' ENTERED AT 19:28:32 ON 07 SEP 2007)

```
FILE 'MEDLINE, EMBASE, BIOSIS, SCISEARCH, DISSABS, TOXCENTER' ENTERED AT
     19:28:49 ON 07 SEP 2007
            478 S (GOLZ S?/AU) OR (BRUGGMEIER U?/AU) OR (WEINGARTNER B?/AU)
L1
L2
              3 S NPFFR1
L3
              0 S GPR147
L4
              0 S GPCR147
              0 S FLJ10751
L5
             18 S OT7T022
L7
            129 S RFAMIDE (1A) RELATED (1A) PEPTIDE
             3 S RFAMIDE (1A) RELATED (1A) PEPTIDE (1A) RECEPTOR
            .23 S RFAMIDE (1A) RELATED (1A) PEPTIDE (5A) RECEPTOR
             9 DUP REM L6 (9 DUPLICATES REMOVED)
L10
             71 S NPFF1
L11
L12
              0 S NPFF1R
            103 S L2 OR L6 OR L9 OR L11
L13
L14
             46 DUP REM L13 (57 DUPLICATES REMOVED)
             17 S L14 AND PY<=2002
L15
             17 DUP REM L15 (O DUPLICATES REMOVED)
L16
L17
              0 S L14 AND L1
              0 S L1 AND NPFF?
L18
              2 S L14 AND (CARDIO?)
L19
              O S L14 AND (HEART OR MYOCARD? OR ISCHEM?)
L20
              1 S L14 AND VASCUL?
L21
```

=> log y

```
<!--StartFragment-->RESULT 1
NPFF1 HUMAN
     NPFF1 HUMAN
                        STANDARD:
                                        PRT;
                                                  430 AA.
      Q9GZQ6; Q8NGRO; Q96RN3;
      27-APR-2001, integrated into UniProtKB/Swiss-Prot. 01-MAR-2001, sequence version 1.
DT
DT
      27-JUN-2006, entry version 38.
      Neuropeptide FF receptor 1 (G-protein coupled receptor 147) (RFamide-
      related peptide receptor OT7T022).
      Name=NPFFR1; Synonyms=GPR147, NPFF1;
os
      Homo sapiens (Human).
      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
оc
      Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini;
      Catarrhini; Hominidae; Homo.
ox
      NCBI_TaxID=9606;
RN
      NUCLEOTIDE SEQUENCE.
RP
RC
      TISSUE=Spinal cord;
RX
      MEDLINE=20564301; PubMed=11024015; DOI=10.1074/jbc.M004385200;
      Bonini J.A., Jones K.A., Adham N., Forray C., Artymyshyn R.,
Durkin M.M., Smith K.E., Tamm J.A., Boteju L.W., Lakhlani P.P.,
      Raddatz R., Yao W.-J., Ogozalek K.L., Boyle N., Kouranova E.V.,
Quan Y., Vaysse P.J., Wetzel J.M., Branchek T.A., Gerald C.,
RA
RA
      Borowsky B.;
      "Identification and characterization of two G protein-coupled
      receptors for neuropeptide FF."
      J. Biol. Chem. 275:39324-39331(2000).
RN
      NUCLEOTIDE SEQUENCE.
RP
      MEDLINE=20482175; PubMed=11025660; DOI=10.1038/35036326;
RX
      Hinuma S., Shintani Y., Fukusumi S., Iijima N., Matsumoto Y.,
      Hosoya M., Fujii R., Watanabe T., Kikuchi K., Terao Y., Yano T., Yamamoto T., Kawamata Y., Habata Y., Asada M., Kitada C., Kurokawa T., Onda H., Nishimura O., Tanaka M., Ibata Y., Fujino M.;
RA
      "New neuropeptides containing carboxy-terminal RFamide and their
RT
      receptor in mammals.";
      Nat. Cell Biol. 2:703-708(2000).
RN
RP
      NUCLEOTIDE SEQUENCE.
      Liu Q., Guan X.-M., McDonald T.P., Jiang Q., Zeng Z., Marlene J., Williams D.L. Jr., Hong Y., Figueroa D., Clements M.K., Mallee J., Wang R., Evans J., Gould R., Austin C.P.;
RA
RA
      "Identification and characterization of two cognate receptors for
      mammalian FMRFamide-like neuropeptides.".
      Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases.
RL
RN
      [4]
      NUCLEOTIDE SEQUENCE.
RP
      Suwa M., Sato T., Okouchi I., Arita M., Futami K., Matsumoto S.,
      Tsutsumi S., Aburatani H., Asai K., Akiyama Y.;
RT
      "Genome-wide discovery and analysis of human seven transmembrane helix
      receptor genes."
      Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
RL
CC
      -!- FUNCTION: Receptor for NPAF (A-18-F-amide) and NPFF (F-8-F-amide)
          neuropeptides, also known as morphine-modulating peptides. Can
CC
           also be activated by a variety of naturally occurring or synthetic
CC
           FMRF-amide like ligands. This receptor mediates its action by
           association with G proteins that activate a phosphatidylinositol-
           calcium second messenger system.
      -!- SUBCELLULAR LOCATION: Membrane; multi-pass membrane protein.
      -!- SIMILARITY: Belongs to the G-protein coupled receptor 1 family
      -!- CAUTION: Ref.4 sequence differs from that shown due to erroneous
CC
           gene model prediction.
      Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC
      Distributed under the Creative Commons Attribution-NoDerivs License
      EMBL; AF268898; AAG41397.1; -; mRNA.
DR
DR
      EMBL; AB040104; BAB17677.1; -; mRNA.
DR
      EMBL; AF330055; AAK94199.1; -; mRNA.
      EMBL; AB065729; BAC05950.1; ALT_SEQ; Genomic_DNA.
      UniGene; Hs.302026;
      Ensembl; ENSG00000148734; Homo sapiens.
DR
      HGNC: HGNC:17425: NPFFR1.
DR
      MIM; 607448; gene.
DR
      GO; GO:0016021; C:integral to membrane; NAS.
      GO; GO:0004930; F:G-protein coupled receptor activity; NAS. GO; GO:0008188; F:neuropeptide receptor activity; NAS.
DR
      InterPro; IPR000276; GPCR_Rhodpsn.
DR
      InterPro; IPR005395; NPFF_rcpt.
DR
      InterPro; IPR005396; NPFF_rcpt_1.
      Pfam; PF00001; 7tm_1; 1.
PRINTS; PR00237; GPCRRHODOPSN.
DR
      PRINTS; PR01570; NPFFRECEPTOR.
PRINTS; PR01571; NPFFRECEPTR1.
DR
      PROSITE; PS00237; G_PROTEIN_RECEP_F1_1; 1. PROSITE; PS50262; G_PROTEIN_RECEP_F1_2; 1.
      G-protein coupled receptor; Glycoprotein; Membrane; Receptor;
      Transducer; Transmembrane.
      CHAIN
                      1
                            430
                                        Neuropeptide FF receptor 1.
                                         /FTId=PRO 0000069913
FT
      TOPO DOM
                      1
                             43
                                         Extracellular (Potential).
```

Sequence Alignment #1

```
TRANSMEM
                             1 (Potential).
    TOPO DOM
                     80
                             Cytoplasmic (Potential).
    TRANSMEM
               81
                     101
                             2 (Potential).
                             Extracellular (Potential).
FT
    TOPO DOM
               102
                     117
    TRANSMEM
               118
                     138
                             3 (Potential)
                             Cytoplasmic (Potential).
    TOPO_DOM
    TRANSMEM
               159
                     179
                             4 (Potential).
    TOPO DOM
               180
                     214
                             Extracellular (Potential).
FT
    TRANSMEM
               215
                     235
                             5 (Potential).
    TOPO DOM
                     271
               236
                             Cytoplasmic (Potential).
    TRANSMEM
               272
                             6 (Potential).
FT
                     292
    TOPO_DOM
               293
                             Extracellular (Potential).
    TRANSMEM
               308
                             7 (Potential).
    TOPO_DOM
               329
                     430
                             Cytoplasmic (Potential).
    CARBOHYD
               10
                     10
                             N-linked (GlcNAc. . .) (Potential).
                             N-linked (GlcNAc. . .) (Potential).
    CARBOHYD
               18
FT
                     18
    CARBOHYD
                             N-linked (GlcNAc. . .) (Potential).
               29
                     29
    CARBOHYD
               113
                             N-linked (GlcNAc. . .) (Potential).
    CARBOHYD
               195
                     195
                             N-linked (GlcNAc. . .) (Potential).
                             By similarity.
V -> A (in Ref. 3)
    DISULFID
               116
                     203
FT
    CONFLICT
               376
                     376
                     47819 MW; BBB0146281B2B9A0 CRC64;
    SEQUENCE
SQ
              430 AA;
                      100.0%; Score 2278; DB 1; Length 430;
  Best Local Similarity
                      100.0%; Pred. No. 1.4e-153;
 Matches 430;
              Conservative
                            0; Mismatches
                                            0;
                                               Indels
          1 MEGEPSOPPNSSWPLSONGTNTEATPATNLTFSSYYOHTSPVAAMFIVAYALIFLLCMVG 60
Qу
            1 MEGEPSQPPNSSWPLSQNGTNTEATPATNLTFSSYYQHTSPVAAMFIVAYALIFLLCMVG 60
Db
Qу
         61 NTLVCFIVLKNRHMHTVTNMFILNLAVSDLLVGIFCMPTTLVDNLITGWPFDNATCKMSG 120
            61 NTLVCFIVLKNRHMHTVTNMFILNLAVSDLLVGIFCMPTTLVDNLITGWPFDNATCKMSG 120
Db
         121 LVQGMSVSASVFTLVAIAVERFRCIVHPFREKLTLRKALVTIAVIWALALLIMCPSAVTL 180
Qу
            Db
            LVQGMSVSASVFTLVAIAVERFRCIVHPFREKLTLRKALVTIAVIWALALLIMCPSAVTL 180
         181 TVTREEHHFMVDARNRSYPLYSCWEAWPEKGMRRVYTTVLFSHIYLAPLALIVVMYARIA 240
Qv
            Db
            TVTREEHHFMVDARNRSYPLYSCWEAWPEKGMRRVYTTVLFSHIYLAPLALIVVMYARIA 240
Qy
         241 RKLCQAPGPAPGGEEAADPRASRRRARVVHMLVMVALFFTLSWLPLWALLLLIDYGQLSA 300
            RKLCQAPGPAPGGEEAADPRASRRRARVVHMLVMVALFFTLSWLPLWALLLLIDYGQLSA 300
Db
            PQLHLVTVYAFPFAHWLAFFNSSANPIIYGYFNENFRRGFQAAFRARLCPRPSGSHKEAY 360
            Db
         301 PQLHLVTVYAFPFAHWLAFFNSSANPIIYGYFNENFRRGFQAAFRARLCPRPSGSHKEAY 360
Qy
         361 SERPGGLLHRRVFVVVRPSDSGLPSESGPSSGAPRPGRLPLRNGRVAHHGLPREGPGCSH 420
            Db
         361 SERPGGLLHRRVFVVVRPSDSGLPSESGPSSGAPRPGRLPLRNGRVAHHGLPREGPGCSH 420
         421 LPLTIPAWDI 430
Ov
            11111111111
        421 LPLTIPAWDI 430
<!--EndFragment-->
```